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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,652

05/30/2006

Joanne Chory

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EXAMINER

BAUM, STUART F

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

06/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,652	Applicant(s) CHORY ET AL.	
	Examiner STUART F. BAUM	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-13 and 23-36, drawn to a method of modulating at least one photosensitive trait in a plant comprising increasing expression of PHYTOCHROME AND FLOWERING TIME 1 (PFT1) by transforming a plant cell with an expression vector comprising a nucleic acid that encodes PFT1 protein, a transgenic plant comprising said expression vector, or a recombinant nucleic acid sequence comprising SEQ ID NO:2 or comprising a nucleic acid sequence encoding SEQ ID NO:3 or variants thereof.

Group II, claim(s) 16, drawn to a method of modulating a photosensitive trait in a plant comprising contacting a plant cell or plant with an inhibitor of a PFT1 gene such that expression of the PFT1 gene is reduced, wherein the inhibitor comprises an expression vector expressing a protein that inhibits expression of the PFT1 gene.

Group III, claim(s) 14-15, 17-22, drawn to a method of modulating a photosensitive trait in a plant comprising contacting a plant cell or plant with an inhibitor of a PFT1 gene such that expression of the PFT1 gene is reduced, wherein the inhibitor comprises an antisense molecule or a short interfering RNA (siRNA) configured to inhibit the production of a PFT1 gene product.

Group IV, claim 37, drawn to an isolated protein.

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Group V, claim 38, drawn to a recombinant nucleic acid molecule encoding a PFT1 protein produced by isolating nuclear material from a plant and isolating from said nuclear material a recombinant nucleic acid molecule encoding a PFT1 protein.

2. The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: a method of modulating a photosensitive trait in a plant comprising altering the level of PFT1 protein in a plant is taught in the prior art. Halliday et al (1997, The Plant Journal 12(5):1079-1090) teach a tobacco plant transformed with a nucleic acid encoding a phytochrome protein wherein the resulting transgenic plant exhibited a modulated flowering time (abstract). The Office notes that Applicants define a PFT1 nucleic acid to include polynucleotides having alterations in the nucleic acid sequence which still encodes a polypeptide having the ability to modulate a photosensitive trait such as flowering response (page 12 of specification, paragraph 50). Based on Applicants' definition of PFT1, the Office contends the nucleic acid of Halliday et al is interpreted to be a PFT1 nucleic acid.

3. In addition, the claims are not linked by a single technical feature because they are each drawn to products and processes not shared by the other. The method of modulating a photosensitive trait comprising a nucleic acid encoding a PFT1 of Group I is not shared by or linked with a method of modulating a photosensitive trait comprising a protein that inhibits the expression of PFT1 of Group II, or is not shared by or linked with a method of modulating a photosensitive trait comprising an antisense nucleic acid of Group III or is not shared by or

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linked with the protein of Group IV or which is shared by or linked with the recombinant nucleic acid molecule of Group V.

4. Each of Inventions I-V are capable of being separately made, independently used and the patentability of one does not render the others obvious or unpatentable.

5. Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by the literature and sequence searches required for each of the Inventions are not required for another of the Inventions, restriction for examination purposes as indicated is proper.

6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

/Stuart F. Baum/
Stuart F. Baum Ph.D.
Primary Examiner
Art Unit 1638
June 13, 2008